

## ABSTRACT

The invention relates to a novel peroxidase enzyme with high dye degradation activity, the genetic information thereof and a method for degrading and decolorizing dye by using the same. The invention enables the degradation and decolorizing of a wide range of dye types in an efficient manner with no occurrence of any problem, such as secondary pollution due to the generation of hazardous byproducts or the discharge of the greenhouse effect gas due to high-level energy consumption.

In accordance with the invention, further, the enzyme can be supplied at a large quantity, on the basis of the genetic information, so the enzyme can be applied to the treatment of wastewater containing dyes and the like, in the fields of staining industry and the like.

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